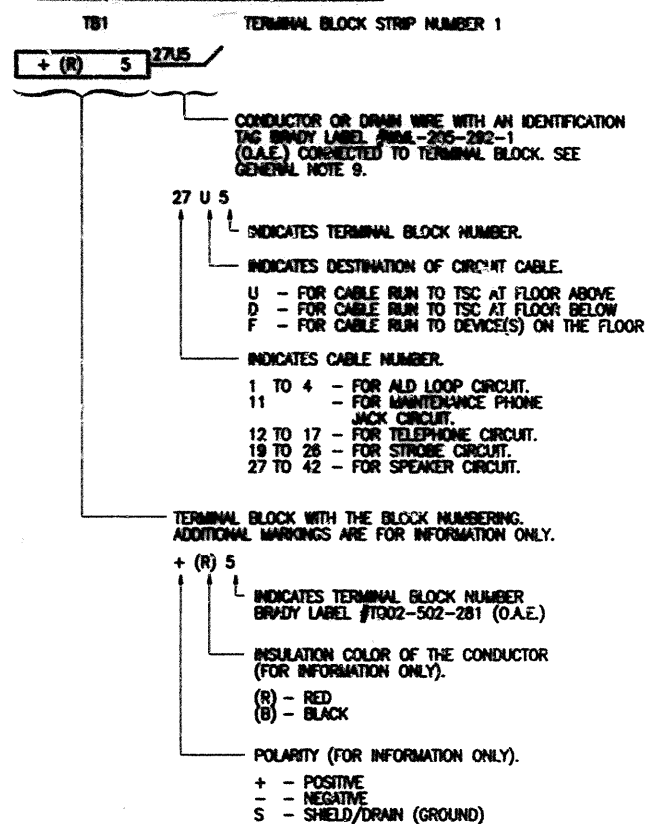
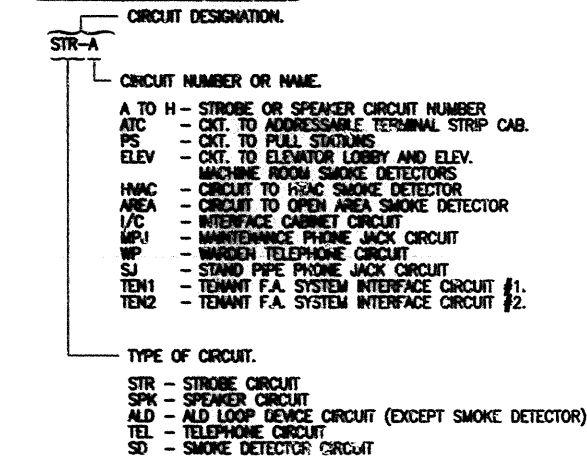


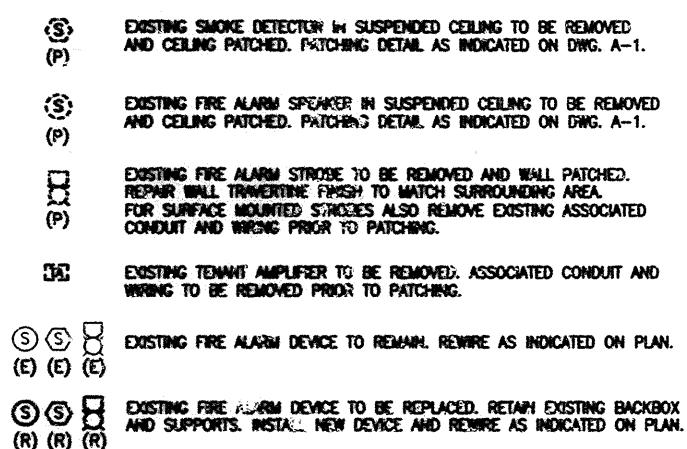
# TERMINATION LEGEND



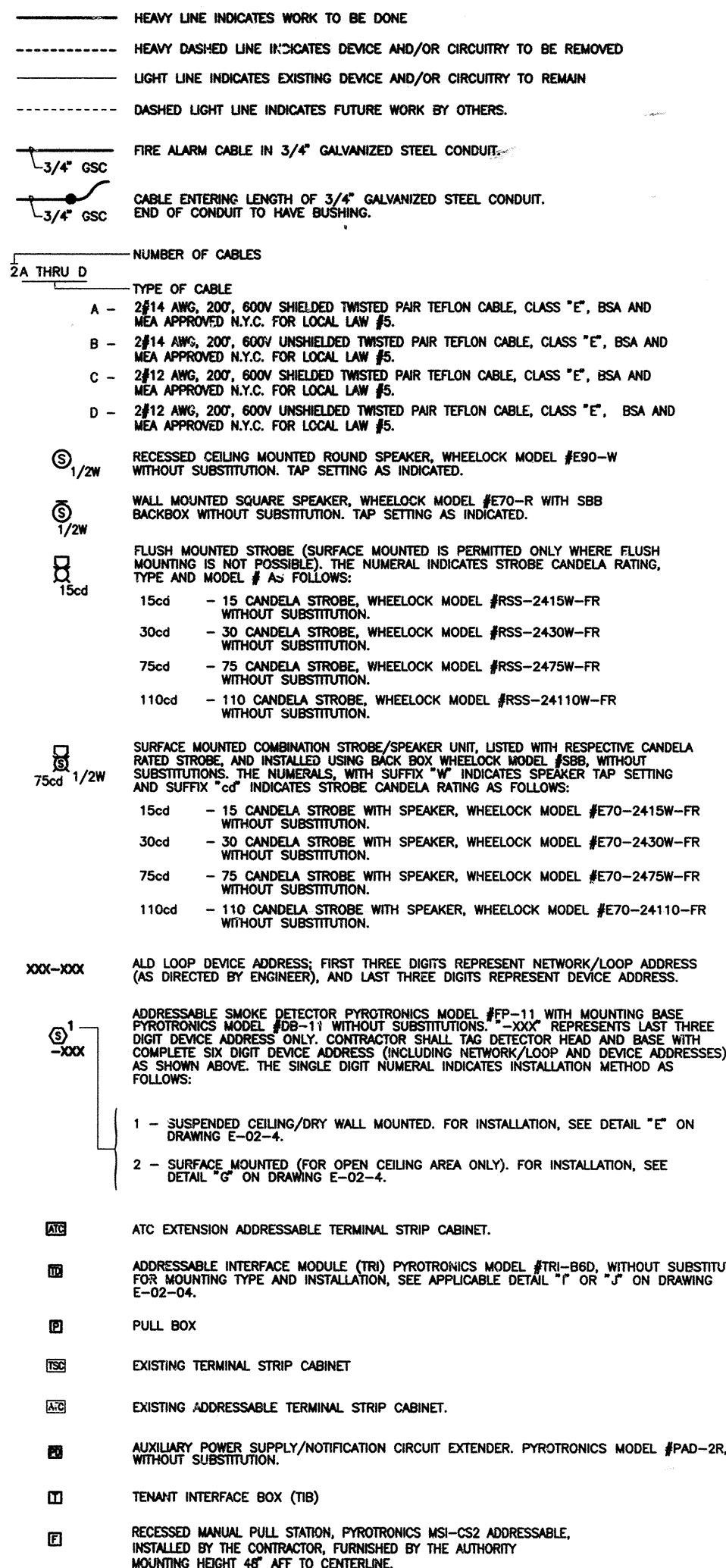
# CIRCUIT LEGEND



# LEGEND FOR REMOVAL, REPLACEMENT OR RETENTION OF EXISTING DEVICES



# LEGEND/SPECIFICATION



# GENERAL NOTES

- ALL FIRE ALARM CABLES SHALL BE TYPE FPLP-UL TWISTED PAIR, SOLID COPPER, 200'C, 600V, SHIELDED (EXCEPT FOR SPEAKERS WHICH USE UNSHIELDED), INSULATED CONDUCTORS, CLASS "E", BSA AND MEA APPROVED FOR NYC LOCAL LAW #5 WITH FEP (TEFLON OR APPROVED EQUAL) INSULATION, AND CONDUCTORS COLORED BLACK & RED, CONDUCTOR SIZE AS SHOWN ON DRAWINGS. ALL FIRE ALARM CABLES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. ALL CABLES INSTALLED IN HUNG CEILING AND ABOVE SHEET ROCK CEILING SHALL BE MOUNTED AND SUPPORTED ABOVE THE CEILING AND INSTALLED WITHOUT CONDUITS, UNLESS OTHERWISE NOTED. ALL OPEN AREAS AND MERS WILL UTILIZE CONDUITS.
- ASSEMBLE DRAW WIRE AT BOTH ENDS OF SHIELDED CABLES USING TYPICAL SHIELD/DRAIN INSULATING METHOD AS SHOWN ON DRAWING E-02-5. SHIELD MUST BE CONTINUOUS THROUGHOUT THE CIRCUIT AND INSULATED.
- PROGRAMMING OF BASE BUILDING SYSTEM FIRE ALARM PANELS WILL BE BY THE AUTHORITY. PROGRAMMING OF ALL ADDRESSABLE DEVICES (SMOKE DETECTORS & TRIS) SHALL BE BY THE CONTRACTOR. FINAL CONFIRMATION OF ADDRESSES SHALL BE AS DIRECTED BY ENGINEER, PRIOR TO PROGRAMMING DEVICES.
- SET TAP SETTINGS ON ALL SPEAKERS (AS SHOWN ON DWG'S), PRIOR TO INSTALLATION.
- ALL PENETRATIONS MADE IN EXISTING FIRE ALARM EQUIPMENT SHALL BE MADE IN THE PRESENCE OF THE ENGINEER. NO TOP PENETRATIONS SHALL BE MADE IN ANY FIRE ALARM PANELS.
- PATCH & SEAL PENETRATIONS FROM ALL CONDUITS PASSING THRU WALLS, FLOORS AND PLENUMS WITH THERMAFIBER (O.A.E.).
- FOR MOUNTING DETAILS AND WIRING DIAGRAMS OF SPEAKERS, STROBES, SMOKE DETECTORS AND TRIS SEE DWG. E-02-4, E-02-5, AND E-02-6. NO "T" TAPPING WILL BE PERMITTED. ALL BOX COVERS, CONDUIT COVERS, ETC. SHALL BE PAINTED RED.
- SHAPING AND LABELING OF ALL CABLES AND FINAL CONNECTIONS IN THE TSC AND ATC CABINETS SHALL BE PERFORMED BY THE CONTRACTOR. THIS WORK SHALL BE DONE IN THE PRESENCE OF THE ENGINEER.
- CONTRACTOR SHALL USE BRADY LABELS #WML-205-292-1 (O.A.E.) FOR LABELING OF ALL CONDUCTORS AND #WML-305-292 (O.A.E.) FOR LABELING OF ALL CABLES.
- UNDER THE DIRECTION OF THE ENGINEER, CONTRACTOR SHALL REMOVE EXISTING CEILING SURFACE MOUNTED SPEAKERS, SMOKE DETECTORS AND STROBES ONLY AFTER DEVICES TO BE INSTALLED ARE OPERATIONAL.
- ALL EQUIPMENT SHOWN TO BE REMOVED SHALL HAVE ITS ASSOCIATED TERMINATION WIRING ABANDONED AND TAPED IN PLACE. ENDS OF ABANDONED CABLES SHALL BE TAGGED "NOT IN USE".
- PRIOR TO INSTALLATION, CONTRACTOR SHALL TEST ALL REELS OF FIRE ALARM CABLES FOR CONTINUITY AND SHORT CIRCUITS. THIS WORK SHALL BE DONE IN THE PRESENCE OF THE ENGINEER.
- FIRE ALARM CABLES SHALL BE TESTED IN ACCORDANCE TO THE AUTHORITY'S ENGINEERING TEST PROCEDURES. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- AS SOON AS ACCESS TO THE CEILING AREA IS NO LONGER REQUIRED FOR THE INSTALLATION AND TESTING OF WIRING AND DEVICES, CONTRACTOR SHALL REPLACE ALL REMOVED CEILING TILES AND/OR PATCH CEILING AS REQUIRED.
- ALL FINISHES DISTURBED BY THE INSTALLATION OF DEVICES OR WIRING SHALL BE RESTORED TO THEIR ORIGINAL OR MATCHING CONDITION.
- CONTRACTOR SHALL COORDINATE DEVICE PENETRATIONS WITH ENGINEER FOR ALL NON-DRYWALL FACED WALLS.
- CONTRACTOR SHALL PERFORM ALL WORK SHOWN ON CERBERUS PYROTROXONICS DRAWINGS. MRLV-NE-M2-1 AND MRLV-NE-M2-2, WHICH INCLUDES INTERNAL WIRING REMOVAL, CHANGES, & ADDITIONS AND EXTERNAL WIRING TERMINATIONS AS WELL AS COMPONENT INSTALLATION, EXCEPT THAT NOTES 1, 2 & 3 ON SAID DRAWINGS SHALL NOT APPLY AND ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS CONTRACT. ALL WORK SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER.
- CONTRACTOR SHALL PERFORM ASBESTOS ABATEMENT AND PROVIDE FIREPROOFING AND/OR INSULATION WHERE ASBESTOS CONTAINING MATERIAL HAS BEEN REMOVED, AS DIRECTED BY THE ENGINEER. FURTHER, THE CONTRACTOR SHALL PROVIDE CUSTODIAL SERVICES TO TENANTS, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE COMPENSATED FOR PERFORMING ASBESTOS ABATEMENT, FIREPROOFING AND/OR INSULATION AND CUSTODIAL SERVICES WORK ON A NET COST BASIS.
- "NET COST" SHALL BE COMPUTED IN THE SAME MANNER AS IS COMPENSATION FOR EXTRA WORK, INCLUDING ANY PERCENTAGE ADDITION TO COST, AS SET FORTH IN THE CLAUSE OF THE CONTRACT PROVIDING COMPENSATION FOR EXTRA WORK. PERFORMANCE OF SUCH NET COST WORK SHALL BE SUBJECT TO ALL PROVISIONS OF THE CONTRACT RELATING TO PERFORMANCE OF EXTRA WORK. COMPENSATION FOR SAID NET COST WORK SHALL NOT BE CHARGED AGAINST THE TOTAL AMOUNT OF COMPENSATION AUTHORIZED FOR EXTRA WORK.

# ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR	JB	JUNCTION BOX
ALD	ANALOG LOOP DRIVER	MER	MECHANICAL EQUIPMENT ROOM
ATC	ADDRESSABLE TERMINAL CABINET	MEZZ	MEZZANINE
BLDG.	BUILDING	MTD	MOUNTED
C	CONDUIT	N.I.C.	NOT IN CONTRACT
CKT	CIRCUIT	NTC	NETWORK TERMINAL CABINET
COL	COLUMN	N.T.S.	NOT TO SCALE
CONC.	CONCOURSE	O.A.E.	OR APPROVED EQUAL
CONT.	CONTINUATION	PAD	AUXILIARY POWER SUPPLY/NOTIFICATION CIRCUIT EXTENDER
DWG.	DRAWING	PB	PULL BOX
(E)	INDICATES EXISTING EQUIPMENT EXCLUDING PULLBOXES AND CONDUIT	RM	ROOM
E.O.L.	END OF LINE RESISTOR (24k $\Omega$ )	TB	TERMINAL BLOCK
EXIST.	EXISTING	TEL	TELEPHONE
FA	FIRE ALARM	TIB	TENANT INTERFACE BOX
FL	FLOOR	TRI	ADDRESSABLE INTERFACE MODULE
FMC	FLEXIBLE METAL CONDUIT	TSC	TERMINAL STRIP CABINET
GSC	GALVANIZED STEEL CONDUIT	TYP	TYPICAL
GND	GROUND	U.O.N.	UNLESS OTHERWISE NOTED
GWB	GYPSUM WALLBOARD	WTC	WORLD TRADE CENTER

THE PORT AUTHORITY  
OF NY & NJ

ENGINEERING PROGRAM MANAGER  
WORLD TRADE  
CHIEF ELECTRICAL ENGINEER

1 7/799 AS-BID  
No. Date Revision Approved

ENGINEERING DEPARTMENT

WORLD  
TRADE  
CENTER

ELECTRICAL

Title  
FIRE ALARM SYSTEM  
DEVICE UPGRADE  
PHASE III

5 WTC  
PLAZA LEVEL

LEGEND, GENERAL NOTES  
AND ABBREVIATIONS

This drawing subject to conditions in Contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

FELDSTEIN B. FAROUKI A.S.  
Designed by Drawn by Checked by

MAY 31, 1999  
Date

WTC-861.572 E-02-1  
Contract Number Drawing Number